

Work Order ID 147684

147684

Page 1

Wednesday, June 08, 2016 2:56:07 PM

Item ID: DSI 9685-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Crossbolt Spacer Installation

Start Date: 6/6/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 6/8/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9685	A		DAS 6 9-89					DAS 21 9-89	16-07-05 (2)
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP DSI 9685-011 CHG001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.01							
Quality Control									

JUL 05 2016

JUL 08 2016

JUL 06 2016

JUL 08 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

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N900040100Setup Start ***NS1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00				DAS 27 9-89	DAS 28 9-89		
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP DSI 9685-011 Location : FG123								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.03							
Quality Control									

JUL 08 2016

DAS
21
9-89 JUL 08 2016DAS
21
9-89 JUL 08 2016

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Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval _____	
Description Work Order Deviation		Disposition			
				Completed By _____	
				Lead hand / Supervisor Approval Verification _____	
				QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Page 1

Work Order ID: 147684

147684

Parent Item: DSI 9685-011

DSI 9685-011

Parent Item Name: Crossbolt Spacer Installation

Start Date: 6/6/2016

Required Date: 6/8/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 14.11.24 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D5101-041		Manufactured	No				Each	53.0000	6	12			PC
D5101-041									**	12			
Crossbolt Spacer Assembly													

Location	Loc Qty	Loc Code
FP001	53	
137417	21	
139261	2	
140171	18	
143449	12	

D5101-3		Manufactured	No				Each	99.0000	12	24			PC
D5101-3									**				
Insert													

Location	Loc Qty	Loc Code
FP001	8	
135947	8	
st151	91	
127964	42	
141362	49	

D5101-5		Manufactured	No				Each	81.0000	24	24			PC
D5101-5									**	24			
Insert													

Location	Loc Qty	Loc Code
FP001	18	
135948	18	
st151	63	
127965	39	
143389	24	

DAS
27
9-89

24

JUL 06 2016

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimension's ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
*Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

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Work Order ID: 147684

147684

Parent Item: DSI 9685-011

DSI 9685-011

Parent Item Name: Crossbolt Spacer Installation

Start Date: 6/6/2016

Required Date: 6/8/2016

Start Qty: 2.00

Required Qty: 2.00

AN4C46A

Purchased

No

Each

188.0000

**

6

12

AN4C46A

Bolt

PC

DAS
27
9-89

Location

Loc Qty

Loc Code

FG

8

123642

2

m132169

6

OVER002

140

m133916

70

m134513

70

ST341

40

m131856

7

m133332

33

MS21043-4

Purchased

No

Each

1,202.000

**

6

12

MS21043-4

Nut

PC

DAS
27
9-89

Location

Loc Qty

Loc Code

FG

40

104603

40

GA

17

m132803

17

OVER007

300

m134502

300

ST302

845

m133769

12

m134249

6

m134634

227

m134754

300

m134943

300

12

JUL 06 2016

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Root Cause				FAULT CATEGORY																																																																																																																											
Environment	☐	Design	☐	Doc/Data	☐	Equip/Tooling	☐	Handling/Pre	☐	Material	☐	Internal Transport	☐	Tribal Knowledge	☐	LOA	☐	Substation	☐	Past Expiry Date	☐	Misidentified	☐	No Re-verification	☐	Operator	☐	Offset/Setup	☐	Supplier	☐	Training	☐	Use for Testing	☐	Poor Information	☐	Rushing	☐	Product Improvement	☐	Process Improvement	☐	Manufacturing Process	☐	Past Due	☐	Pressure/Forced	☐	Bending	☐	Centre Not Concentric	☐	Cracks	☐	Crimp/Kink/Ripple/Wave	☐	Cuffs	☐	Crushing	☐	Heat Treat	☐	Wave/Twist in Tube	☐	Marks/Chatter	☐	Temperature/Cure	☐	Set-up	☐	BOM/Route	☐	Broken/Damage/Defect	☐	Inspection Incomplete/Unqualified	☐	Contamination	☐	Countersink	☐	Cut Too Short	☐	Instructions Incomplete/Unclear	☐	Drill Holes	☐	Power Loss/Surge	☐	Folio/Program	☐	Grain	☐	Weld	☐	Wrong Stock Pulled	☐	Out of Sequence	☐	Off-set	☐	Mislabeled	☐	Fit/Function	☐	Misaligned/off center	☐	Positioned Wrong	☐	Outside Dimensions	☐	Over/Under tolerance	☐	Part Incorrect	☐	Part Lost/Missing	☐	Part Moved	☐	Drawing	☐	Finish	☐	Misread	☐	Turning Sequence	☐
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DSI 9685-011

Parent Item Name: Crossbolt Spacer Installation

Start Date: 6/6/2016

Required Date: 6/8/2016

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0416J

Purchased

No

Each

4,038.000

48

NAS1149D0416.I

WASHER

**

PK



Location

Loc Qty

Loc Code

GA

168

m131511

168

ST260a

1984

m131511

1984

ST264

1886

m131511

1886

48

DAS
27
9-89

JUL 06 2016

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Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Try Date ☐ Identified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D119-646 REV. B
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D119-646 REV. 1
REF FAA STC: SR02024SE
REF EASA STC: 10040294

1.0 PURPOSE:

Customers may have experienced spinning inserts on Dart D119-646-013/-014/-113/-114/-213/-214 float skid tubes. This DSI provides a repair for those spinning inserts.

2.0 INSTALLATION:

- 2.1 Remove AN4C6A Bolts securing the 604.0902 Float to the RH skid tube
- 2.2 Remove the 12 inserts from the skidtube extension.
- 2.3 Open the insert holes (12x) to 0.437" +0.010/-0.000. Deburr and alodine hole per MIL-DTL-5541
- 2.4 Remove AN3 bolts securing the D2855-3 Cap to the skidtube. Break/remove sealant between cap and skidtube and remove cap. Clean off residual sealant and inspect for corrosion damage per Dart ICA-D119-646 Chapter 5.
- 2.5 Using locally procured 1/4-20 UNC threaded rod attached to the D5101-041 Crossbolt Spacer, slide it into the skidtube.
- 2.6 Align the holes in the D5101-041 Crossbolt Spacer with the newly drilled holes in the skidtube. Some adjustment of the size of the spacer is permitted to fit it to the deepest set of holes.
- 2.7 Using the D5101-3 and D5101-5 inserts, secure the D5101-041 Crossbolt Spacer to the skidtube. Reference Figure 1. Remove the threaded rod. Torque inserts to 95-110 in.lbs (10-12 N-m).
- 2.8 Repeat steps 2.4-2.7 for the other 2 crossbolt spacer locations.
- 2.9 Reinstall D2855-3 Cap with AN3 bolts. Seal bolts with Sikaflex-241/-291 or Proseal 890 or MIL-S-8802 Class 'B2' sealant. Torque bolts to 15-25 in-lbs (1.7-2.8 N-m). Apply a bead of Sikaflex -241/-291 or Proseal 890 or MIL-S-8802 sealant between the cap and the skidtube.
- 2.10 Reinstall the 604.0902 Float onto the skidtube using 3x AN4C46A Bolts per Figure 1.
- 2.11 Repeat steps 2.1-2.10 for the LH skidtube.

3.0 PARTS LIST:

Qty. (011)	PART NUMBER	DESCRIPTION
X	DSI 9685-011	CROSSBOLT SPACER KIT
6	D5101-041	CROSSBOLT SPACER ASSEMBLY
12	D5101-3	INSERT
12	D5101-5	INSERT
6	AN4C46A	BOLT
6	MS21043-4	NUT
24	NAS11490D0416J	WASHER

4.0 WEIGHT AND BALANCE

Incorporating this DSI causes the following weight and balance changes

Installation	Weight	LONGITUDINAL		LATERAL	
		Arm	Moment	Arm	Moment
DSI 9685-011 CROSSBOLT SPACER KIT	1.5 lb 0.68 kg	208.0 in 5.3 m	312 in-lb 3.6 kg-m	0.0 in 0.0 m	0.0 in-lb 0.0 kg-m

A	NEW ISSUE	AK	14.07.30
REV.	DESCRIPTION	BY	DATE
DESIGN	AK	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AK		
CHECKED	HS	DRAWING NO.	REV. A
MFG. APPR.	JL	DSI 9685	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CROSSBOLT SPACER KIT	NTS
DATE	14.07.30	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	